



CLEAN efforts in California

Clean Local Energy Accessible Now (CLEAN)

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Mission

Accelerate the transition to cost-effective clean energy while delivering unparalleled economic benefits

Board of Advisors

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Jim Weldon

CEO, Solar Junction

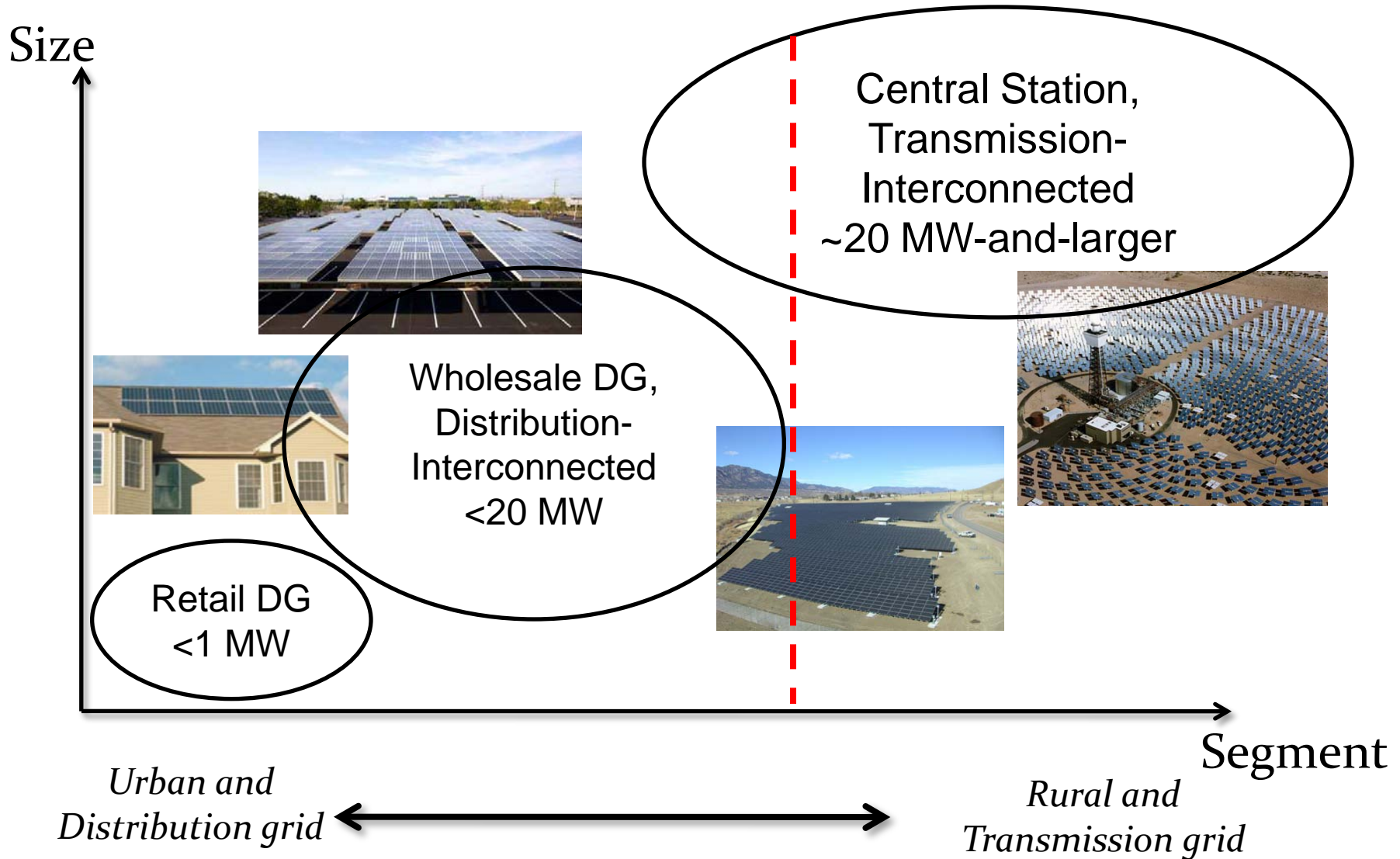
R. James Woolsey

Chairman, Woolsey Partners, and Former Director of the CIA

Kurt Yeager

ED, Galvin Electricity Initiative

Wholesale Distributed Generation (WDG) = Solution



- CLEAN Features:
 - Standard and guaranteed contract between the utility and a renewable energy facility owner
 - Predictable and streamlined distribution grid interconnection
 - Predefined and financeable fixed rates for long durations
- CLEAN Benefits
 - Removes the top three barriers to renewable energy
 - The vast majority of renewable energy deployed in the world has been driven by CLEAN Programs
 - Allows any party to become a clean energy entrepreneur
 - Attracts private capital, including vital new sources of equity
 - Drives local employment and generates tax revenue at no cost to government

CLEAN Programs provide **Transparency, Longevity & Certainty (TLC)*** to the **WDG energy market** by removing the main barriers to the sale of clean local energy to utilities.

Procurement

- **Barrier:**
Securing a contract to sell renewable energy involves high transaction costs and risks
- **Solution:**
Standardized contract terms and rates for long duration

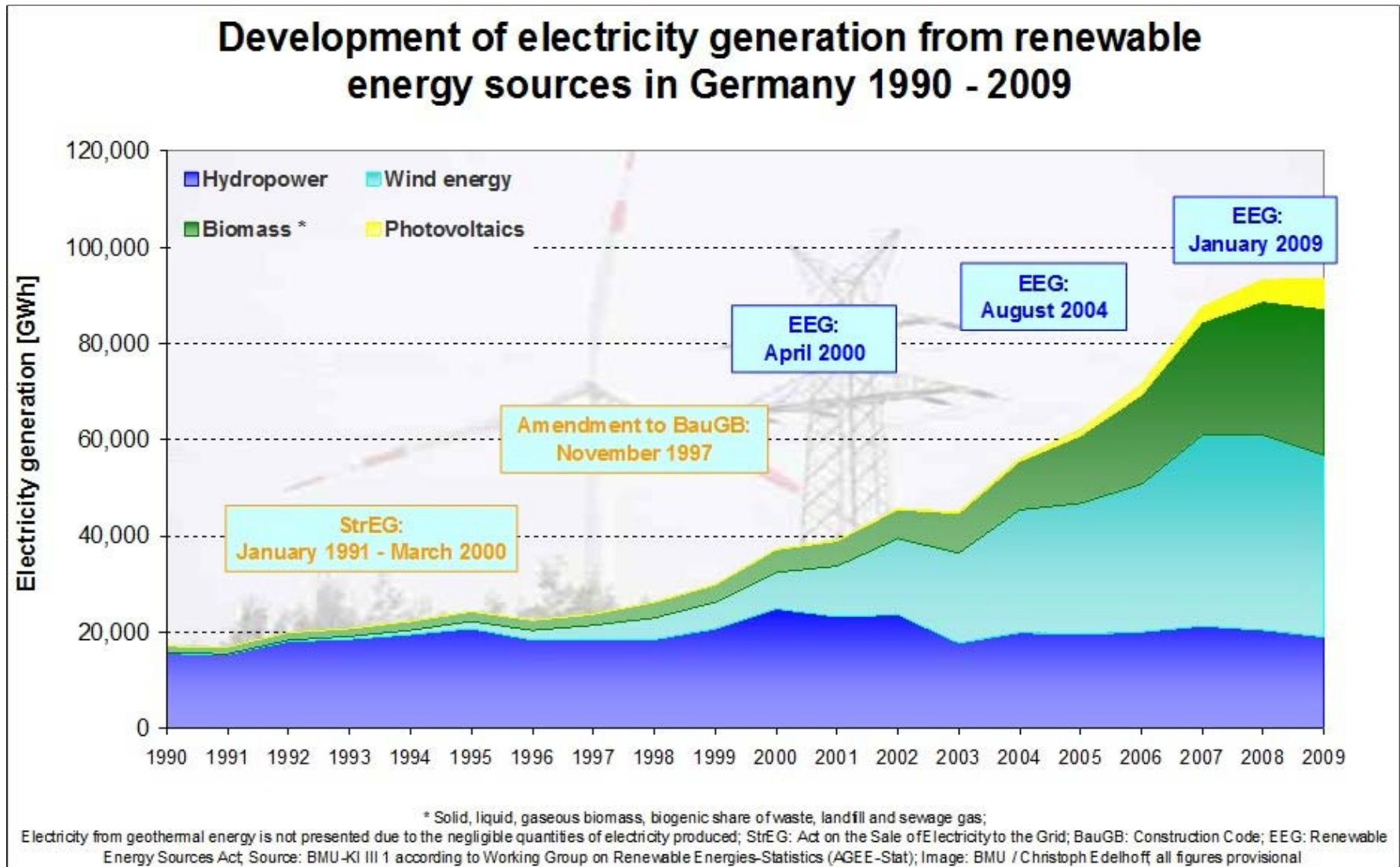
Grid Access

- **Barrier:**
Gaining access to the distribution grid is risky, expensive, and time-consuming
- **Solution:**
Transparent and streamlined distribution grid interconnection process

Financing

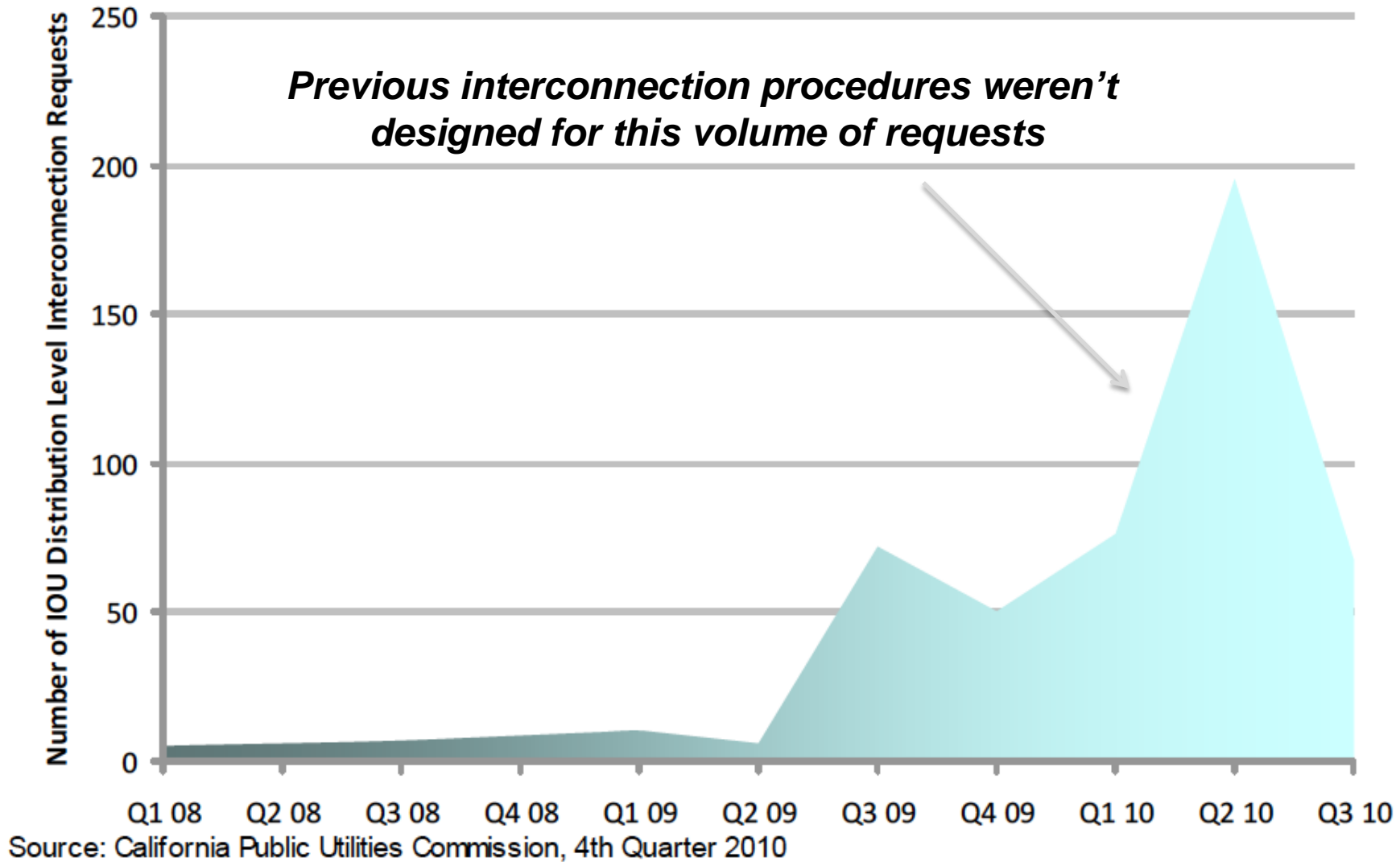
- **Barrier:**
Risk associated with other noted barriers and lack of secure financial basis to attract investors and lenders
- **Solution:**
Predictable cash flow stream from a low credit-risk source (the utility)

* See Deutsche Bank Climate Change Advisors report at http://www.dbcca.com/dbcca/EN/_media/German_FIT_for_PV.pdf



- SB32 - CA CLEAN law passed in 2009, modified in 2011
 - Previous AB1969 FIT produced very little
 - Implement SB32 ASAP, CPUC is moving aggressively
 - Projects up to 3 MW
 - New Pricing Models
 - Unclear how to ensure that Bioresources can access this program
- Renewable Auction Mechanism (RAM)
 - Each of the three major utilities will hold an auction this fall
 - Technologies separated by generation profile: Peaking, non-peaking, baseload
 - Specified megawatts (MW) set aside for baseload – well suited to bioresources.
 - Must have already completed Phase 1 of interconnection

D-Grid Interconnection Requests



- Interconnection desperately needs reform
 - Confusing mix of tariffs, jurisdiction, rules
 - Unpredictable timelines, costs : expected average of 2+ years
 - Missing key policy requirements: Transparency and Certainty
- Wholesale Distribution Access Tariff (WDAT)
 - Federal jurisdiction – “reformed” in early 2011
 - Needs data transparency and accountability to the rules
- Rule 21
 - CPUC jurisdiction – initially targeted at Retail DG
 - CPUC has initiated “faster” settlement process
 - Major rework to handle large volumes of Wholesale DG



CLEAN ⚡ **COALITION**
Making Clean Local Energy Accessible Now

Local CLEAN Program Guide

Module 1: Overview & Key Considerations



- Targeting communities and individual utilities with **Local CLEAN Program Guide**
- How-to manual for creating CLEAN Programs
- Could be used by municipal utilities, cities, CCA orgs, etc.
- Accessible to all via free download

www.EnergyJobsNow.org



RAEL
UC Berkeley



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Back-up Slides

- Local CLEAN Programs
 - Gainesville (early 2009)
 - Sacramento (early 2010)
 - San Antonio (June 2010)
 - Los Angeles (expected 2011)
 - Fort Collins, CO (expected 2011)
 - Palo Alto, CA (expected 2011)
 - Local CLEAN Program Guide (2011)
 - www.Clean-Coalition.org/local-action

- State CLEAN Programs
 - Vermont enacted the first statewide program in mid-2009
 - Hawaii and Oregon enacted programs in 2010
 - Connecticut is moving Governor-sponsored CLEAN legislation
 - CLEAN California Campaign
 - www.EnergyJobsNow.org

Free download: <http://www.Clean-Coalition.org/local-action>

Contact us: LocalGuide@Clean-Coalition.org

Structure of the Guide:

Module 1: [Overview & Key Considerations](#)

Module 2: [Establishing CLEAN Contract Prices](#)

Module 3: Understanding the Avoided Cost of Generating Energy

Module 4: Selecting the Program Size and Rate Impact

Module 5: Quantifying the Economic Benefits of CLEAN Energy

Module 6: Designing CLEAN Program Policies & Procedures

Module 7: Generating Support for a CLEAN Program

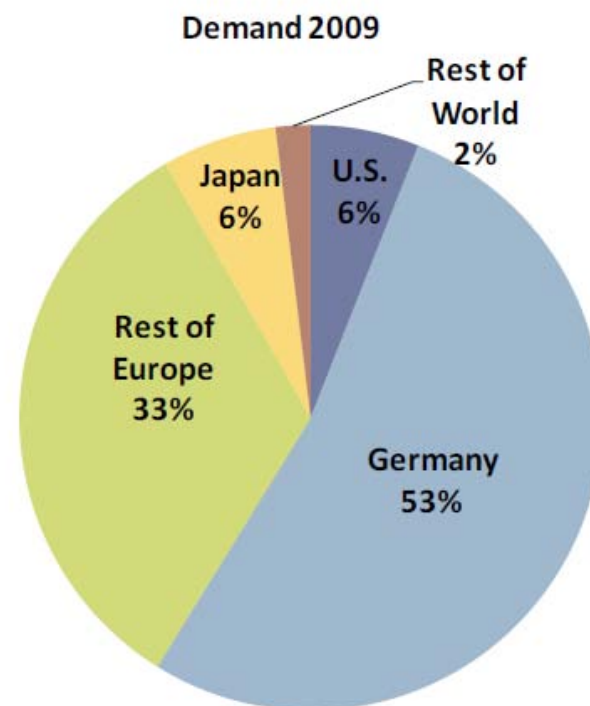
- Most expensive German CLEAN rate is set for solar
- Germany's weighted average solar rate is about US\$0.30/kWh
- In Colorado, the equivalent rate would be less than \$0.12/kWh
 - Tax credits in US reduce the German rate by 40%
 - Investment Tax Credit (ITC) and Accelerated Depreciation
 - Solar resource is at least 50% better in Colorado, which reduces German rate by more than an additional one-third
- Effectively: 30 cents/kWh goes to 18 and then to less than 12

German PV rate of 30 cents is equivalent to less than 12 cents in Colorado

CLEAN Programs (also known as **feed-in tariffs**) are the most effective policy solution for spurring renewable energy installations around the world

CLEAN Programs are responsible for **45% of all wind energy** and **75% of all solar PV capacity** installed in the world **before 2008**
(National Renewable Energy Laboratory)

CLEAN Programs are responsible for **86% of the solar capacity** deployed in the world in **2009**
(Navigant Consulting, Meister Consultants Group)



Source: Navigant Consulting